

Biopsija sjemenika u neplodnih pacijenata s mikrodelecijom kromosoma Y



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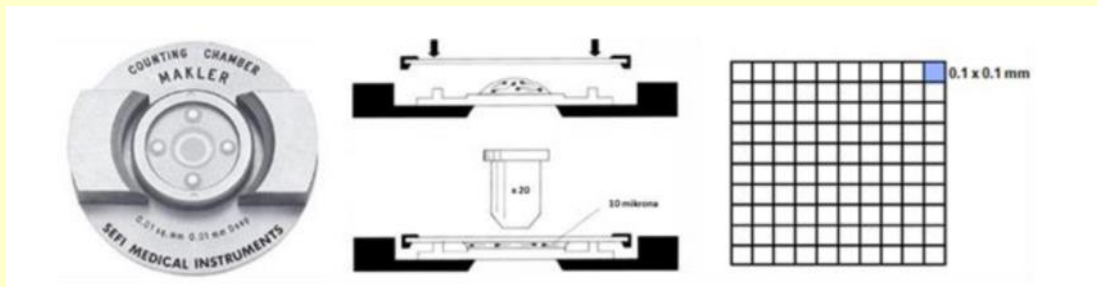
**Klinički zavod za transfuzijsku medicinu i
transplantacijsku biologiju**

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AZOOSPERMIJA



**AZOOSPERMIJA =
POTPUNI
NEDOSTATAK
SPERMIJA
U EJAKULATU
(i nakon
centrifugiranja
sjemena)**



POTVRĐENA AZOOSPERMIJA



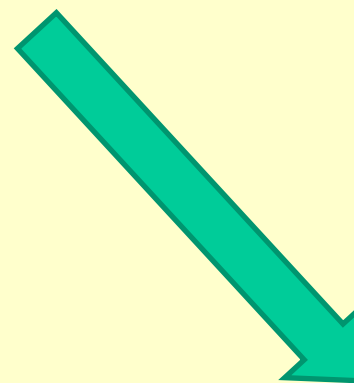
- Smjernice Europske androloške akademije (EAA) (kolovoz 2018.):
- Karyotype analysis and assessment of Yq microdeletions
- Cystic fibrosis transmembrane conductance regulator gene evaluation (CFTR)
- We suggest to investigate by transrectal US (TRUS)

AZOOSPERMIJA

- **8-20% NEPLODNIH MUŠKARACA**



**Opstruktivna azoospermija
(OA)**



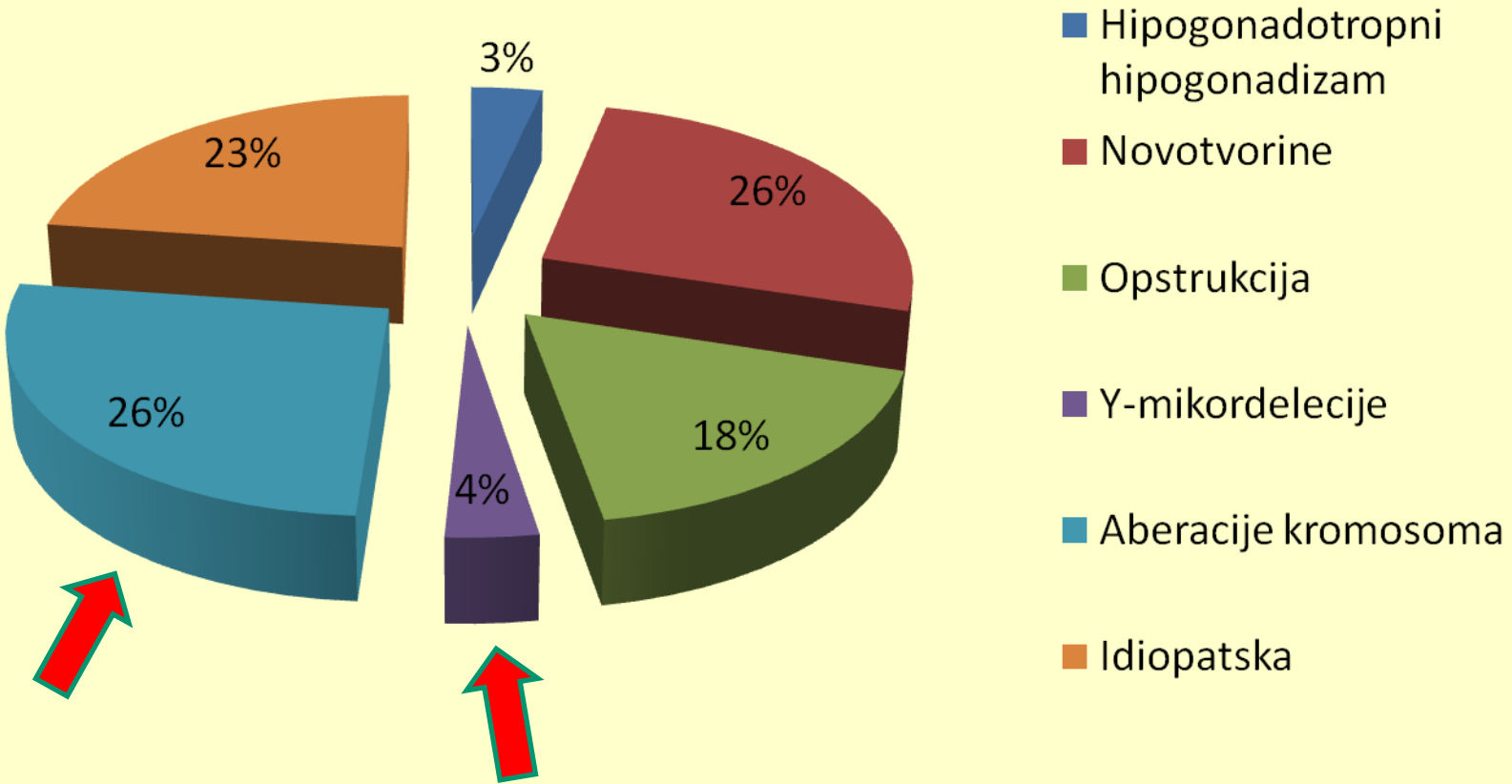
**Neopstruktivna azoospermija
(NOA)**



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**1. veljače 2013.
Banka sjemenika**

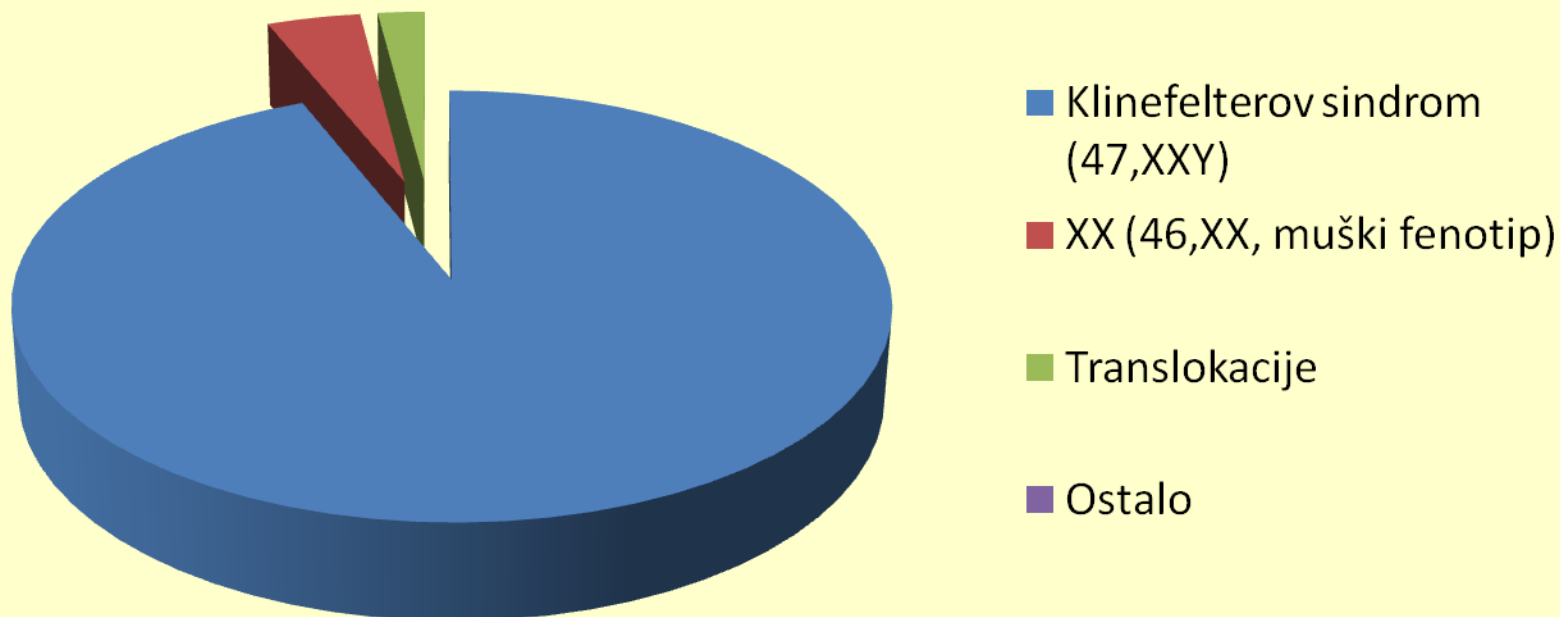
AZOOSPERMIJA - UZROCI



AZOOSPERMIJA

– KROMOSOMSKE ABERACIJE

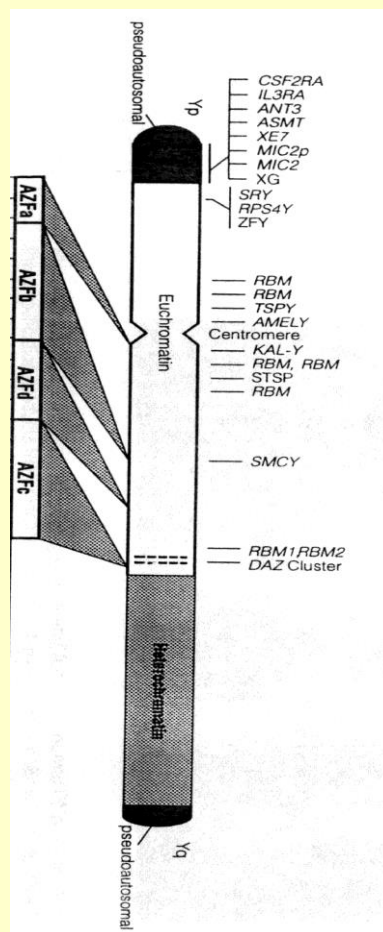
n=217



Y- KROMOSOM

ANALIZA MIKRODELECIJA

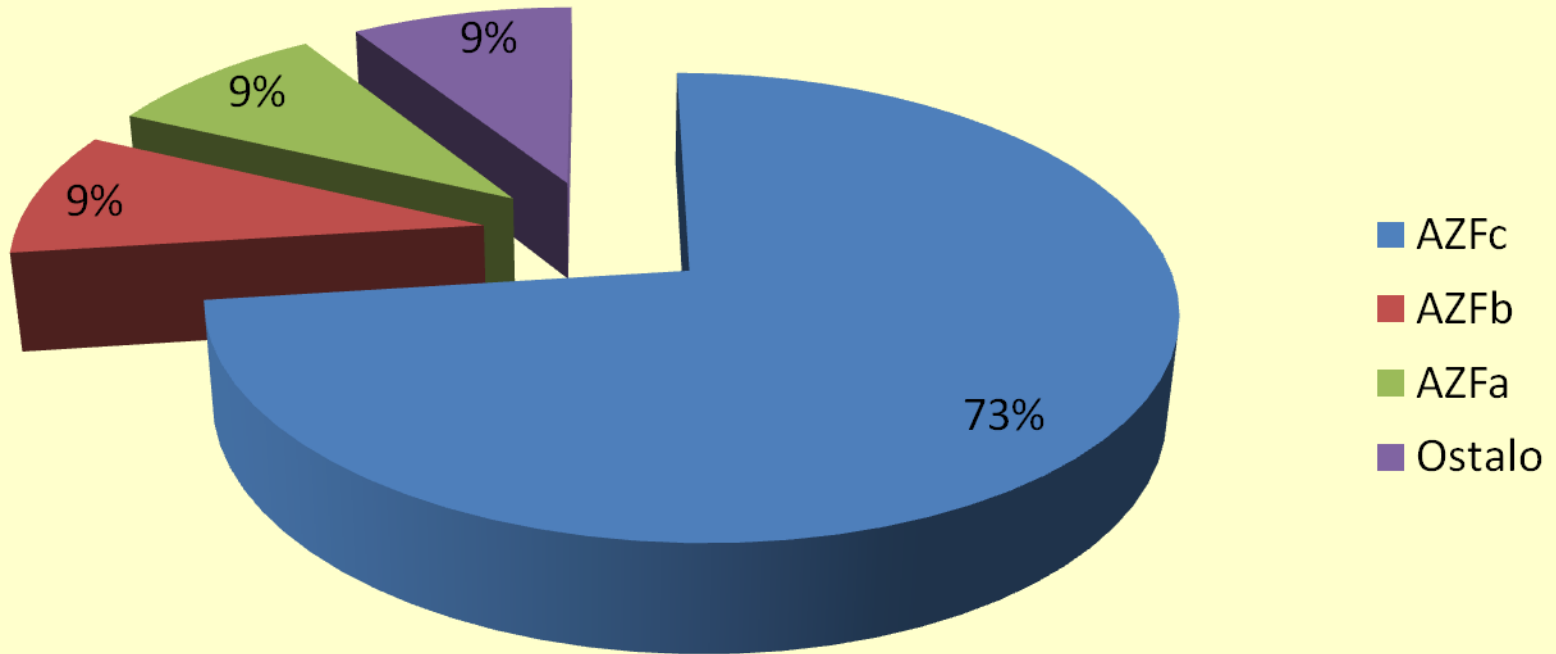
- Podregije a, b, c ,d
- Mikrodelecije podregije c i djelomične delecije regije b: u 50 % slučajeva se nađu spermiji
- Kompletne mikrodelecije regije b: slaba vjerojatnost izolacije spermija



Prof. dr. sc. Jadranka Sertić
Klinički zavod za lab. dijagnostiku
KBC Zagreb

MIKRODELECIJE Y- KROMOSOMA

n=230



AZF a/b = neuspješna
TESE

ICSI

(Intracitoplazmatska injekcija spermija u oocitu)

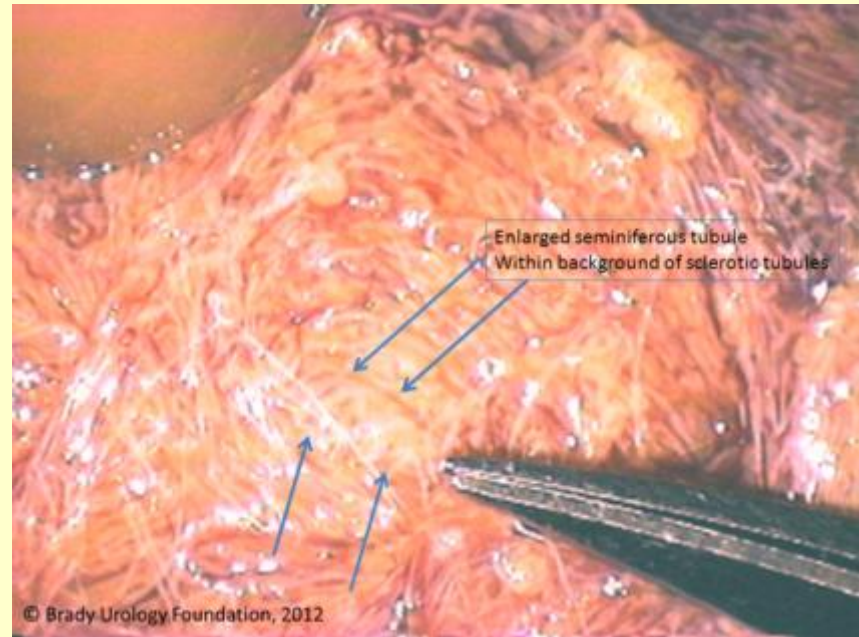
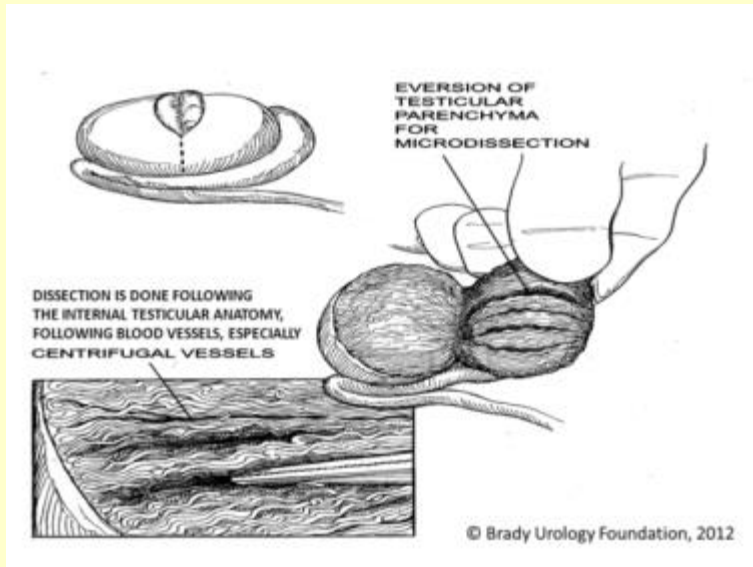


TESE- „klasični oblik” (otvorena biopsija sjemenika)

- **Smjernice EUA/EAA:**
- Načiniti višestruke biopsije sjemenika, obično na 3 različita mjesta
- Obavezno načiniti krioprezervaciju
- Obavezno načiniti detaljnu histološku analizu



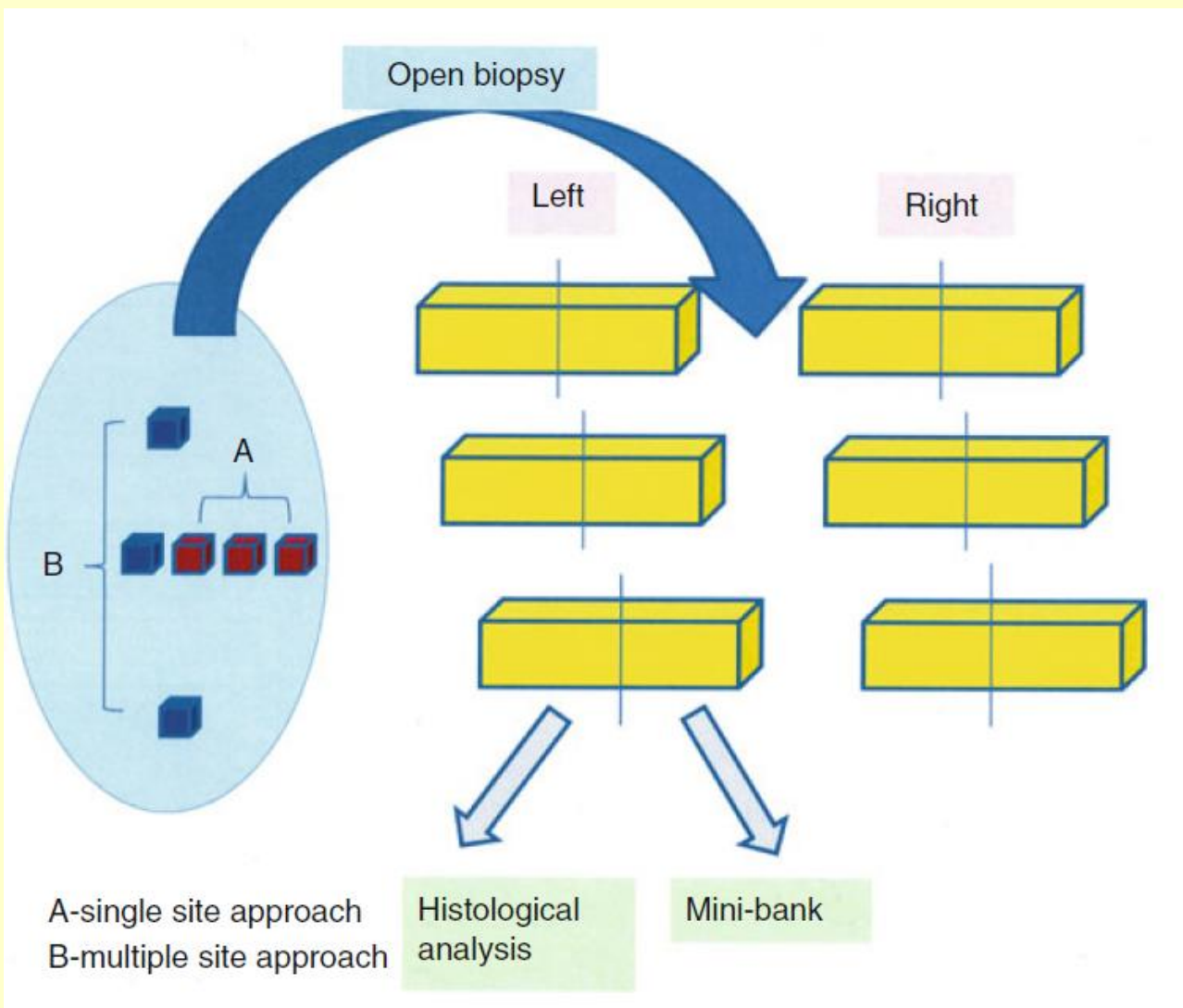
mTESE



Ježek D. (ed.): Atlas on the human testis: Normal morphology and pathology, Springer Verlag, London, 2013.

BIOPSIJA SJEMENIKA

(„piece per piece”)

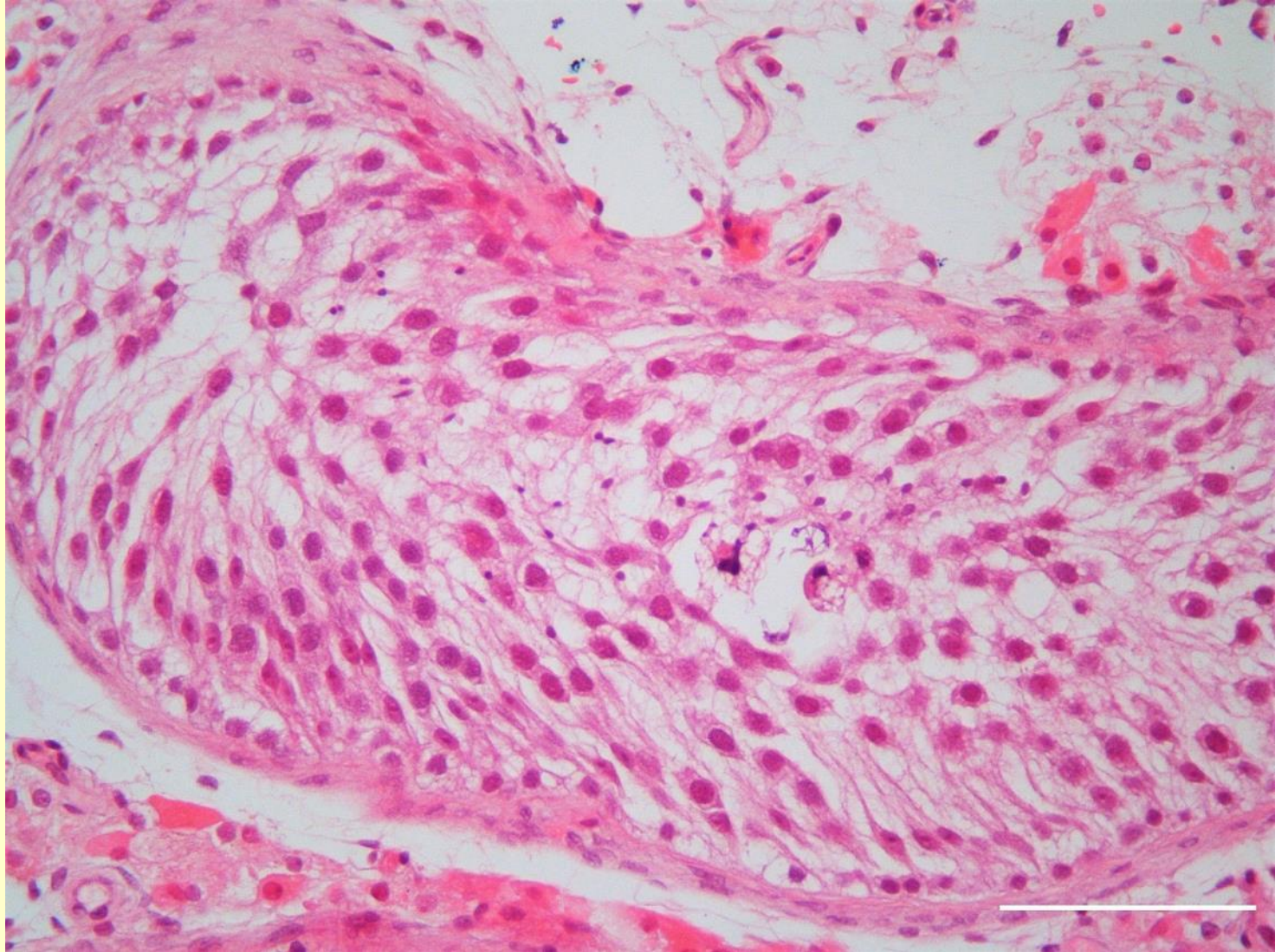


Ježek D. (ed.): Atlas on the human testis:
Normal morphology and pathology.
Springer Verlag London, 2013

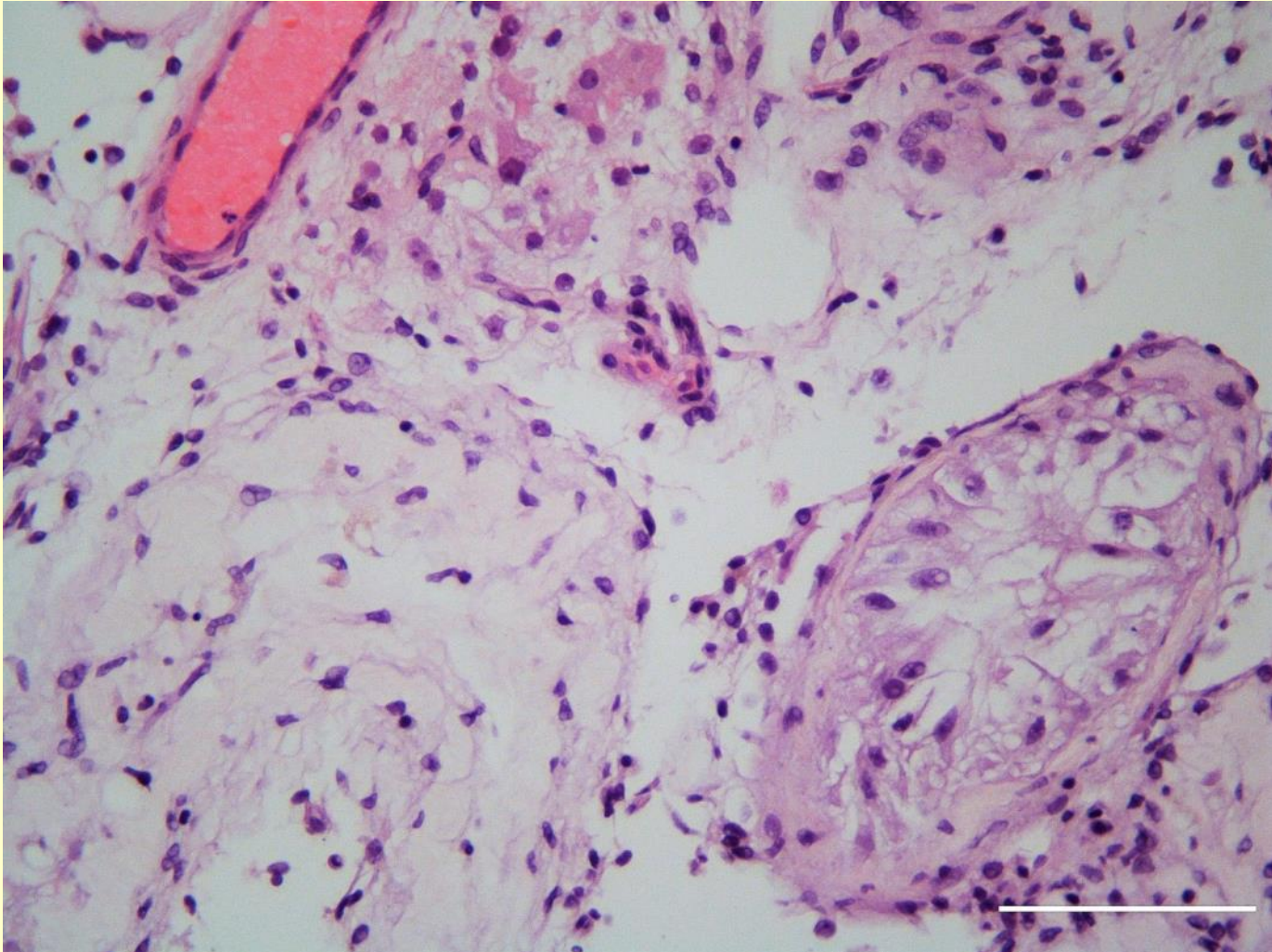
Mikrodelecija AZFc



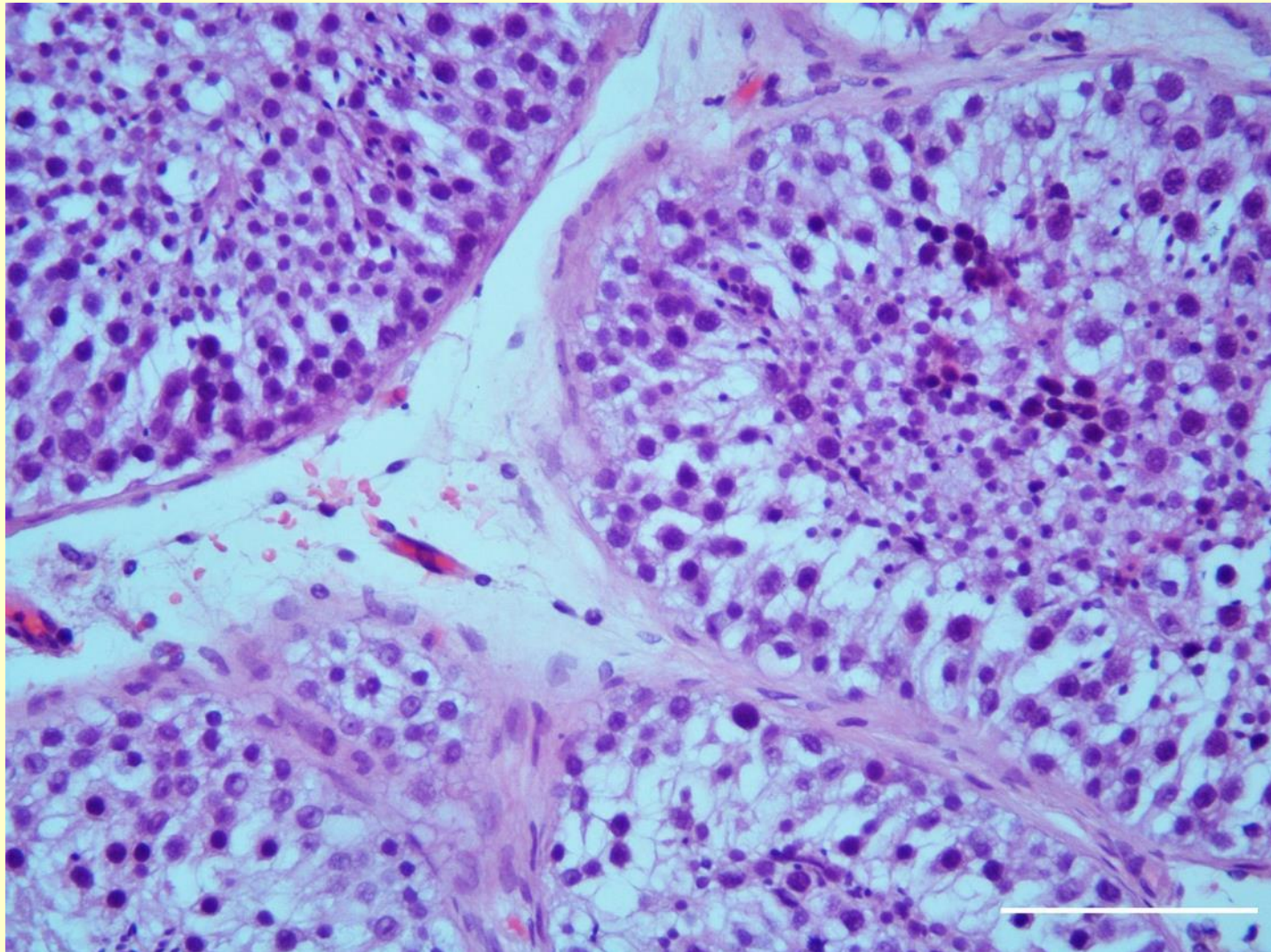
Djelomična mikrodelecija AZFb



Delecija gr/gr



CFTR delecije

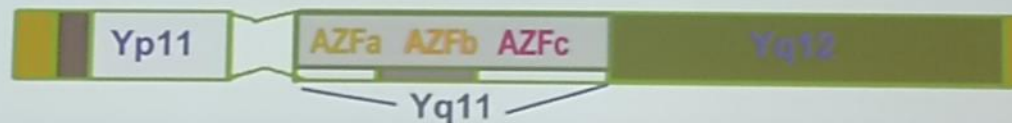


Razlika leukociti-tkivo testisa



UniversityHospital Heidelberg

Comparative analyses of AZF microdeletions in leukocytes & testis tissue of TESE patients reveal genetic mosaicism in germ line impairing sperm prognosis



- Diagnostic for **complete AZF microdeletions in leukocytes** of infertile men with azoospermia is advised in the infertility clinic **before TESE** to identify **complete AZFa and AZFb** deletions, because in these cases TESE is supposed to find no mature sperms!

However:

We do not know whether rate and extension of the AZF microdeletion observed in patients leukocytes corresponds to that present in patients germ cells in the testis !

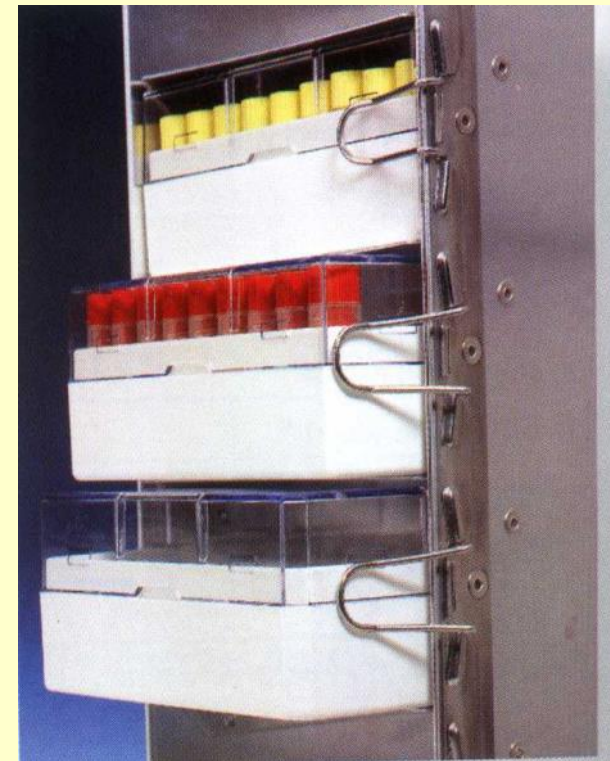
AZF genes are functional ONLY in male germ cells !

13:06

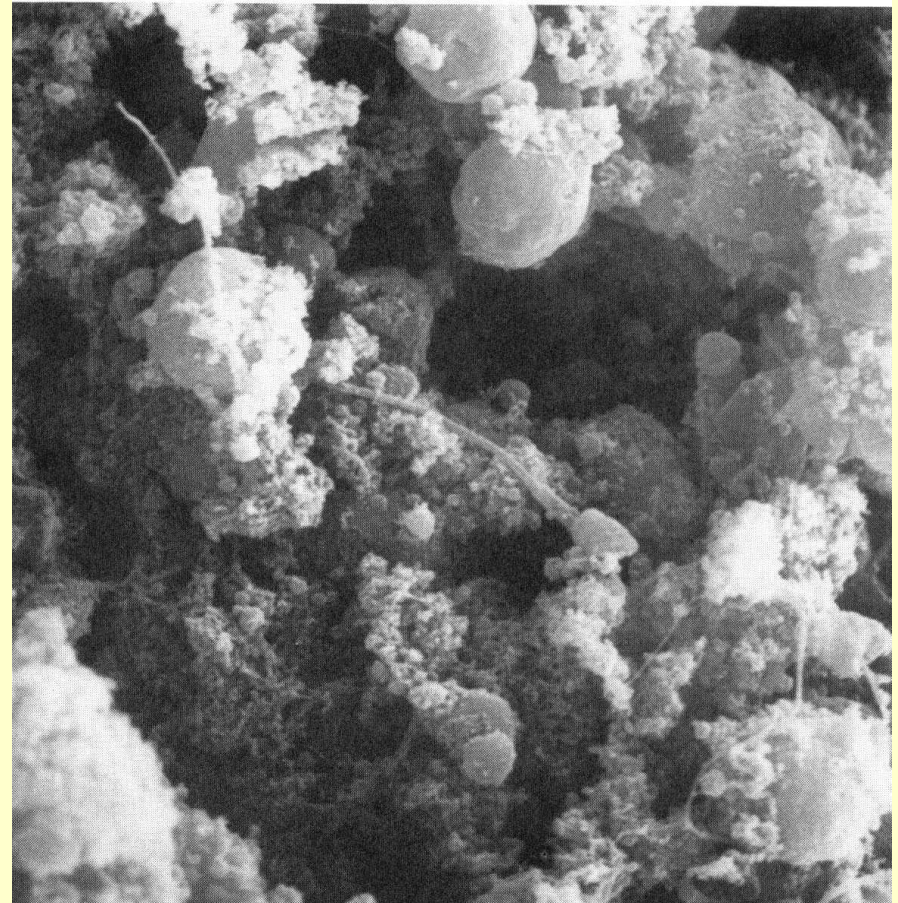
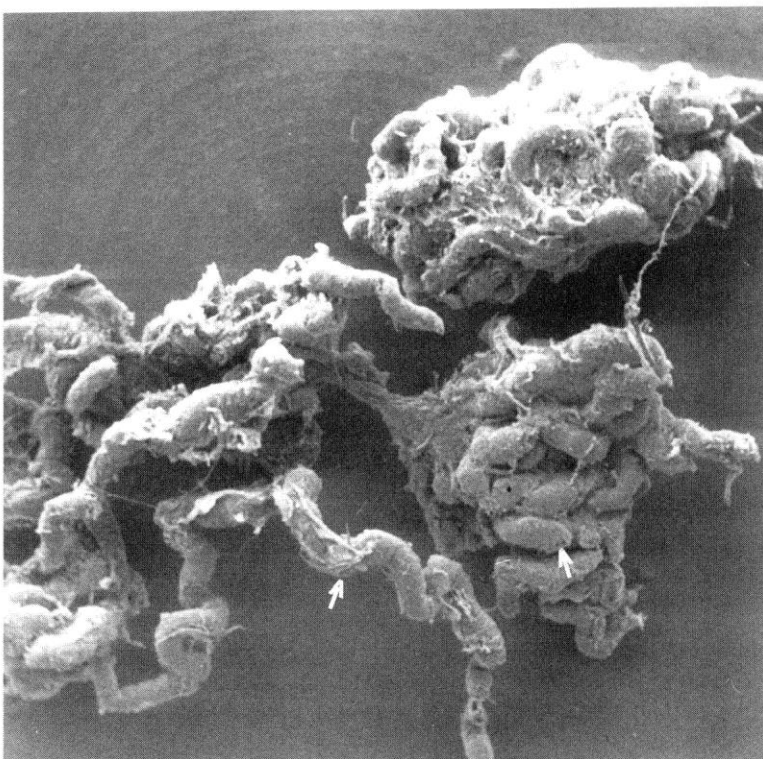
Peter H. Vogt with : Ulrike Bender, Jutta Zimmer; Jens Dietrich & Thomas Strowitzki

IZOLACIJA SPERMIJA

- Inkubacija u vodenoj kupelji (37°C)
- Inkubacija s kolagenazom (CO₂ inkubator)
- Maceracija
- Centrifugiranje
- ICSI (Intracitoplazmatska injekcija spermija u jajnu stanicu)



UTJECAJ KOLAGENAZE



PREDNOSTI ZAMRZAVANJA TKIVA SJEMENIKA

- **PRIJE TESE/ICSI** zahvata postoji detaljna histološka analiza (uvid u stupanj očuvanosti spermatogeneze)
- **TESE/ICSI** se može ponavljati a da se pacijent ne mora re-operirati
- **STIMULACIJA JAJNIKA** se može znatno bolje planirati
- U pravilu, neplodni muškarac se operira samo **JEDANPUT**, a aspiracija jajnih stanica žene (*nakon biopsije sjemenika*) je vremenski nezavisna



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